

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection



Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

Contract #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000518

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Nov-2009

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0491

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Lift 12 Floor Beam Weld Joint
Procedural	Procedural	Description:	

Reference Description: ZPMC welder was observed welding in the downhill progression that is not in compliance with the approved WPS for Lift 12

Description of Non-Conformance:

During random in-process visual inspection on Orthotropic Box Girder Floor Beams in Bay # 2, this Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) repair of weld joint identified as Complete Joint Penetration (CJP) SEG3001L-PP111-008 (Lift 12). Welding was observed being performed in the 3G position with a vertical downward progression which does not comply with the applicable repair Welding Procedure Specification WPS-345-SMAW-3G (3F)-Repair.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

-AWS D1.5 2002 section 4.6.8: “The progression for all passes in the vertical position shall be upward, unless a downward progression is qualified by tests approved by the Engineer”.

-Approved Repair WPS # WPS-345-SMAW-3G (3F)-Repair: “Welding Progression – Vertical – Up Direction”

Who discovered the problem: Sandeep Kumar Naddi

Name of individual from Contractor notified: Luo Gui Lin

Time and method of notification: 1430 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1530 hours, Verbal

QC Inspector's Name: Chen Xi

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon,Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh,Mazen

SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge

333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 23-Dec-2009

Contract No: 04-0120F4
04-SF-80-13.2 / 13.9

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Document No: 05.03.06-000481

Subject: NCR No. ZPMC-0491

Reference Description: ZPMC welder was observed welding in the downhill progression that is not in compliance with the approved WPS for Lift 12

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG **Lift:** 12

Remarks:

During random in-process visual inspection on Orthotropic Box Girder Floor Beams in Bay # 2, this Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) repair of weld joint identified as Complete Joint Penetration (CJP) SEG3001L-PP111-008 (Lift 12). Welding was observed being performed in the 3G position with a vertical downward progression which does not comply with the applicable repair Welding Procedure Specification WPS-345-SMAW-3G (3F)-Repair.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0491

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao

File: 05.03.06

NCR PROPOSED RESOLUTION

To: CALTRANS - SAS Superstructure
333 Burma Road
Oakland CA 94607

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000481

Subject: NCR No. ZPMC-0491

Dated: 19-Jan-2010

Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9

Job Name: SAS Superstructure

Document No.: ABF-NPR-000525 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC issued an NCR which the corrective action was to completely remove the weld and re-weld it. ZPMC is attaching NDT documentation to show that the weld is acceptable.

ZPMC issued an NCR which the corrective action was to completely remove the weld and re-weld it. ZPMC is attaching NDT documentation to show that the weld is acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000525R00;

Caltrans' comments:

Status: CLO

Date: 24-Jan-2010

The documentation submitted by the contractor has been reviewed by the Engineer and is found to be acceptable.

Submitted by: Chao, Ching

Date: 24-Jan-2010

Attachment(s):



No. B-588

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-1-18

REGARDING: NCR-00518 (ZPMC-0491)

With this letter of response, ZPMC requests closure of CT NCR-00518 (ZPMC-0491), what mentioned that CT Inspector observed welder was welding in a downhill progression on 3G position.

- ZPMC acknowledged this problem and has issued internal NCR. See attached NCR-B-337(ZPMC-491).
- The weld was confirmed to be SEG3001L-PP111-008. The correct action was taken by removing of this weld.
- NDTs were performed after weld was completed again to warrant the quality. See attached BVT45534 & B787-UT -9980.

Based on the taken actions and documentations, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-0000518 (ZPMC-0491)

NCR-B-337 (ZPMC-0491)

BVT45534

B787-UT -9980

fy *sw*
1/18/10

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 23-Dec-2009

Contract No: 04-0120F4

04-SF-80-13.2 / 13.4

Job Name: SAS Superstructure

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Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0491

Reference Description: ZPMC welder was observed welding in the downhill progression that is not in compliance with the approved WPS for Lift 12. The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG

Remarks:

Lift: #2

During random in-process visual inspection on Orthotropic Box Girder Floor Beams in Bay #3, this Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) repair of weld joint identified as Complete Joint Penetration (CJP) SEG3001L-PP111-008 (Lift 12). Welding was observed being performed in the 3G position with a vertical downward progression which does not comply with the applicable repair Welding Procedure Specification WPS-345-SMAW-3G (3F)-Repair.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0491

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao
File: 05.03.06

05.03.06-000481,NCT

Received
NCT-000481 28 Dec 09

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Cty: SF/ALA Rte: 80 PM: 13.2/13.9

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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Report No: NCR-000518

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Nov-2009

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0491

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

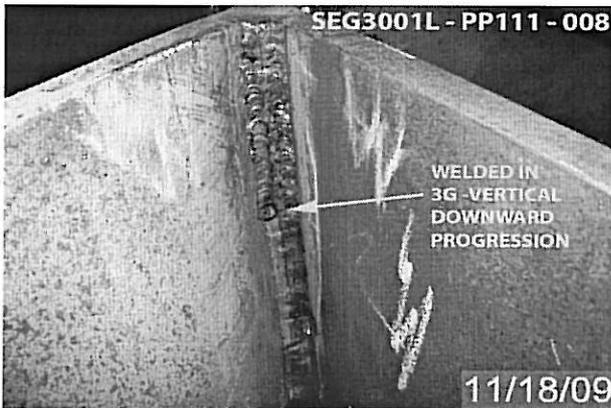
Bridge No: 34-0006

Component: Lift 12 Floor Beam Weld Joint

Reference Description: ZPMC welder was observed welding in the downhill progression that is not in compliance with the approved WPS for Lift 12

Description of Non-Conformance:

During random in-process visual inspection on Orthotropic Box Girder Floor Beams in Bay # 2, this Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) repair of weld joint identified as Complete Joint Penetration (CJP) SEG3001L-PP111-008 (Lift 12). Welding was observed being performed in the 3G position with a vertical downward progression which does not comply with the applicable repair Welding Procedure Specification WPS-345-SMAW-3G (3F)-Repair.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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Who discovered the problem: Sandeep Kumar Naddi

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Time and method of notification: 1430 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1530 hours, Verbal

QC Inspector's Name: Chen Xi

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

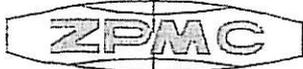
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon,Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh,Mazen

SMR



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B 项目名称: 美国加州海湾大桥		NCR Number: NCR 编号: NCR-B-337(ZPMC-0491)	
Item: incorrect welding progression 名称描述: 焊接方向错误	Item Number: 件号: Lift 12 Floor Beam Weld Joint	Drawing: 图号: N/A	
Location: bay 2 位置: 2#车间	Date: 日期: 2009-12-30		

Description of Nonconformance:
不符合项状态描述:

During random in-process visual inspection on Orthotropic Box Girder Floor Beams in Bay 2, the Caltrans QA inspector observed ZPMC personnel performing SMAW repair of weld joint identified as CJP SEG3001L-PP111-008(Lift 12). Welding was observed being performed in the 3G position with a vertical downward progression which does not comply with the applicable repair WPS-345-SMAW-3G(3F)-Repair and AWS D1.5 2002 section 4.6.8: The progression for all passes in the vertical position shall be upward, unless a downward progression is qualified by tests approved by the engineer.

加州检验员在2#车间对OBG横隔板进行目检时发现, ZPMC在对CJP焊缝SEG3001L-PP111-008(Lift 12)上采用3G自上而下的方法进行返修, 这不符合相关规定。根据AWS规定立焊位置所有焊道的施焊方向必须由下向上, 否则, 由上向下焊接要经试验评定, 并经工程师批准。

Work By: 施工方: jirjian	Prepared by: zhywei 准备: 2009.12.31	Reviewed by QCE: 质量工程师批准: Lu Rankua
<input type="checkbox"/> Drawing Error 图纸错误	<input type="checkbox"/> Material Defect 材料缺陷	<input type="checkbox"/> Fabrication Error 制作错误
<input type="checkbox"/> Other 其他原因 12/31/09		

Disposition: 处理措施:	<input type="checkbox"/> Use as is 回用	<input type="checkbox"/> Repair 返修	<input type="checkbox"/> Reject 拒收
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Recommendation:
建议:

Prepared by: _____ 准备	Approved by QCA: _____ 质量经理批准
--------------------------	----------------------------------

Reason for Nonconformance:
不符合原因: 由于焊缝表面补焊, 焊工操作失误, 采用自上而下的焊接。
Weld shall fix and welder operated error. weld from top to down.

Prevention of Re-occurrence:

预防措施:

焊后, 采用磁粉方法去除, 补焊
 Gauge the fix weld after welding, perform UT to ensure no crack.
 分: 做 MT 确认无裂纹 再打磨 焊
 heating and weld from down to top, perform UT after
 接: 自下而上焊接, 打磨充焊后, 做 UT. MT
 grinding
 确认完成 焊工现场教育, 已整改

Approved by/批准: Zhang Guiming

Technical Justification for Use-As-Is/Repair: Attachment Non-attachment

回用或返修的技术依据: 附件 无附件

将此焊缝去除重新焊接,
 Remove weld and re-weld.

Reviewed /批准: Man Liyi 1.10/10

Verification: Acceptable Unacceptable
 确认: 可接受 不可接受

Verified by QCI/质检确认:

王海峰

Reviewed by QCA/质检主任审核:

Zhan Haifeng
2010.



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-9980 DATE 2009.12.03 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: OBG FLOOR BEAM DRAWING NO.: SEG3001L/SEG3001M
 部件名称 12 LIFTING 图号 01M CALTRANS CONTRACT NO.: 04-0120F4
 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 FCAW T-JOINT Dec. 28ST, 2009

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510,
 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIV BLOCK TYPE II C.M.C A709M-345T2-X 20/24mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	Reference Level 参考灵敏度		20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
SEG3001L-PP110-007															*
SEG3001L-PP110-008															*
SEG3001M-PP110-007															*
SEG3001M-PP110-008		70				32								ACC.	100%

* SEG3001M-PP110-008 were UT inspection and ACC, which is the result of required 25% UT.
 * SEG3001M-PP110-008 焊缝经UT检测合格, 累积检测长度已经达到了此批要求的25%检测长度。

BLANK

EXAMINED BY 主探 <i>Han Feng</i> LEVEL - II SIGN / DATE 09.12.03	REVIEWED BY 审核 <i>Jim Feng</i> LEVEL - II SIGN / DATE 09.12.03
质量经理 / QCM <i>[Signature]</i> 12/28/09 签字 SIGN / 日期 DATE	用户 CUSTOMER 签字 SIGN / 日期 DATE

Tool Box Training Agenda

Subject: MT Techniques

Reason for Training: Several CT NCR's of indications missed during ZPMC NDT inspection.

1. Safety

- a. Safety Glasses
- b. Gloves (if required)
- c. Knee Pads
- d. Electrical shock

2. Tools

- a. Lighting
- b. MT Powder. Red for ambient, Yellow for High Temperature.
- c. Powder Bulb
- d. Powder Blower
- e. MT Yoke Adequate working condition
- f. Pie Gage

3. Inspection Techniques

- a. Lighting
- b. Position of body (distance of eyes to the weld surface)
- c. Application of Powder removal of Powder
- d. Continuous method
- e. Two directions
- f. Both sides of weld
- g. Clean and dry surface



教育培训纪录

培训编号: MT-22-Dec-09

培训内容:	MT Techniques
培训对象:	项目质检
授课人员:	Steve Lawton
培训类型:	内部培训
培训时间:	22-Dec-09 5:00 PM
计划培训地点:	ZPMC QC office

人员签到:

姓名	部门	姓名	部门
孙力杰 Sunlei	钢桥	狄坤伦 Di Kunlun	钢桥
孙广强 Sun Guangqiang	钢桥	蔡新鑫 Cai Xinxin	钢桥
徐海 Xu Hai	钢桥	傅春强 Fu Chunqiang	钢桥
卜源源 Bian Yuan Yuan	钢桥	顾云武 Gu Yunwu	钢桥
许兵 Xu Bing	钢桥	金建廷 Jin Jianting	钢桥 MT
李振华 Li Zhenhua	钢桥	常方杰 Chang Fangjie	钢桥
李坤阳 Li Xunyang	QA	袁俊 Yuan Jun	钢桥
王威 Wang Wei	钢桥	刘章敏 Liu Zhangmin	
孙林 Sun Lin	钢桥 MT	徐华祥 Xu Huaxiang	钢桥
丁阿成 Ding A Cheng	钢桥 MT	周东超 Zhou Dongchao	钢桥
贺佳佳 He Jiajia	钢桥	赵成功 Zhao Cheng Gong	钢桥
黄瑞 Huang Rui	钢桥	孙广强 Sun Guangqiang	钢桥
李黎明 Li Liming	钢桥	徐辉 Xu Hui	钢桥
李昌涛 Li Changtao		刘宏斌 Liu Hongbin	

DEPARTMENT OF TRANSPORTATION

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Office of Structural Materials

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000471**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 22-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0491**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Descriptor:	

Date the Non-Conformance Report was written: 18-Nov-2009**Description of Non-Conformance:**

During random in-process visual inspection on Orthotropic Box Girder Floor Beams in Bay # 2, this Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) repair of weld joint identified as Complete Joint Penetration (CJP) SEG3001L-PP111-008 (Lift 12). Welding was observed being performed in the 3G position with a vertical downward progression which does not comply with the applicable repair Welding Procedure Specification WPS-345-SMAW-3G (3F)-Repair.

Contractor's proposal to correct the problem:

Replace weld following the WPS disposition and perform the required NDT.

Corrective action taken:

Weld was replaced and NDT documentation was submitted to verify the weld is in conformance with Contract specifications.

Did corrective action require Engineer's approval? Yes No**If so, name of Engineer providing approval:****Date:****Is Engineer's approval attached?** Yes No**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Jim Simonis, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer